HARNESS, DICKEY & PIERCE, P.L.C.
Attorneys and Counselors
5445 Corporate Drive, Suite 400
Troy, Michigan 48098-2683
Phone: 248-641-1600
Fax: 248-641-0270
St. Louis, MO • Washington, D.C.

DATE:	January 4, 2003
NO. OF PAGES (INCLUDING THIS PAGE):	6

FOR:	Examiner James Brittain	ORIGINAL WILL FOLLOW BY: ☐ REGULAR MAIL ☐ OVERNIGHT MAIL ☐ COURIER ☒ WILL NOT FOLLOW
COMPANY:	United States Patent and Trademark Office	
FAX NO.:	703 746-3650 PHONE:	

FROM: Mark A. Frentrup, phone 248 641-1278

Please let us know by phone or fax if you do not receive any of these pages.

COMMENTS:

Dear Examiner Brittain,

Attached for discussion during our scheduled telephone conference on Monday Jan. 6 at 10:30 is a set of proposed claims.

Also attached is the Associate Power of Attorney that Robert Siminski, Attorney of Record, faxed on December 20, 2002, to the official fax number 703 872-9326.

Inventor Enbody and I will call you in your office at 10:30. Inventor Tomanek was also to have participated, but will be unable to because he is giving an invited lecture in England on nanotechnology at that time.

Thank you for your consideration. I look forward to speaking with you on Monday.

Best regards,

Mark Frentrup

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	09/601,540
Filing Date:	September 6, 2000
Applicant:	Tomanek, et al.
Group Art Unit:	3677
Examiner:	James R. Brittain
Title:	MICRO-FASTENING SYSTEM AND METHOD OF MANUFACTURE
Attorney Docket:	6550-000017/US1

PROPOSED AMENDMENT

1. (Twice Amended) A microfastening system comprising:

a first fastening element including a plurality of extending nanotubes;

and

a second fastening element including a plurality of extending nanotubes;

[whereby upon joining said first and second fastening elements,] wherein the extending nanotubes from each element are disposed so as to become mechanically interconnected [without requiring the degradation of said nanotubes] as the first and second fastening elements are joined by advancing toward each other.

24. (Amended) A microfastening system comprising:

a first fastening element including a plurality of extending nanotubes; and

a second fastening element including a plurality of extending nanotubes, wherein said nanotubes of at least one of said fastening elements are selectively deformable;

whereby upon joining said first and second fastening elements, the extending nanotubes from each element become mechanically interconnected, wherein said fastening elements are reusable.

35. (Amended) A method of manufacturing a microfastener comprising the steps of:

a) providing a substrate having an attachment surface;

b) introducing a plurality of open ended selectively deformable non-linear nanotubes to said substrate whereby said nanotubes are attracted to said attachment surface and become affixed thereto, wherein said microfastener is reusable.

57. (Amended) A method of manufacturing a microfastener having nanotubes with two ends, comprising the steps of:

a) providing a substrate having an attachment surface;

b) introducing a plurality of open ended nanotubes to said substrate whereby said nanotubes are attracted to said attachment surface and become affixed thereto, wherein at least some of the nanotubes become affixed at only one end, wherein said microfastener is reusable.

67. (NEW) A microfastening system according to claim 1, wherein the fastening elements comprise a substrate including an attachment surface anda plurality of functionalized non-linear nanotubes attached to and extending from said attachment surface, wherein the nanotubes have a free standing end which is free of the surface.

68. (NEW) A microfastening system comprising:

a first fastening element including a plurality of extending nanotubes; and

a second fastening element including a plurality of extending nanotubes;

wherein the extended nanotubes of the fastening elements are functionalized so as to obtain mating fastening elements.

69. (NEW) A microfastening system according to claim 68, wherein the nanotubes are disposed so as to become mechanically interconnected as the elements are advanced toward one another.

70. (NEW) A microfastening system according to claim 68, wherein the fastening elements comprise a substrate including an attachment surface and a plurality of functionalized non-linear nanotubes attached to and extending from said attachment surface, wherein the nanotubes have a free standing end which is free of the surface.

71. (NEW) A microfastening system comprising a plurality of mating nanoscale fastening elements, wherein the fastening elements comprise carbon nanotubes structurally modified to include bent portions.

72. (NEW) A microfastening system according to claim 71, wherein the nanotubes are so disposed that the fastening elements become mechanically interconnected as the elements are advanced toward one another.

73. (NEW) A microfastening system according to claim 71, wherein the fastening elements comprise a substrate including an attachment surface and a plurality of functionalized non-linear nanotubes attached to and extending from said attachment surface, wherein the nanotubes have a free standing end which is free of the surface.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	09/601,540
Filing Date:	September 6, 2000
Applicant:	Tomanek, et al.
Group Art Unit:	3677
Examiner:	James R. Brittain
Title:	MICRO-FASTENING SYSTEM AND METHOD OF MANUFACTURE
Attorney Docket:	6550-000017/US1

Commissioner of Patents and Trademarks
Washington, D.C. 20231

CERTIFICATE OF MAILING/TRANSMISSION			
I hereby certify that this correspondence is being facsimile transmitted to Examiner James R. Brittain at (703) 872-9326 of the U.S. Patent and Trademark Office on the date indicated below.			
Typed or printed name	Mark A. Frentrup		
Signature	/Mark Frentrup/	Date	12/20/02

ASSOCIATE POWER OF ATTORNEY

Sir:

Please recognize Mark A. Frentrup, Registration No. 41,026, as Associate Attorney of Record for the above-named patent application.

Respectfully submitted,

By: /Robert M Siminski/
Robert M. Siminski, Reg. No. 36,007
Attorney of Record

Dated: December 20, 2002

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600